Gambia

ANNUAL REPORT OF THE DEPARTMENT OF AGRICULTURE, FOR THE YEAR ENDING 31ST MAY, 1940.

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Annual Report of the Department of Agriculture, for the year ending 31st. May, 1940.

SECTION I.

AGRICULTURE IN THE COLONY AND PROTECTORATE.

Meteorology.

1. *Weather.*—Early rains were light and the wet season was not really established until July after which the rains were well maintained and evenly distributed. Apart from a few isolated showers the rainy season ended in October and all Provinces were able to report a satisfactory growing season except for rice in the Upper River Province.

Food Crops.

2. *General.*—The ' hungry period ' was nowhere evident in 1939 and the continued propaganda aimed towards self sufficiency in the matter of food requirements is having effect. There are indications that the number of ' strange farmers ' will show a considerable increase during the coming season which may result in localised shortage of food.

3. *Grain Crops.*—In some districts of the North Bank and South Bank Provinces the late establishment of the rains had an adverse effect on the early grain crops but good yields of the main crops of guineacorn and millet were obtained thrughout the Protectorate. The rice harvest was generally good.

4. *Root crops.*—Cassava, sweet potatoes and to a lesser extent yams, all continue to increase. Cassava, formerly grown as a compound crop is now appearing in the fields.

5. *Minor Crops.*—Everywhere there has been an increase in the growing of garden crops during the dry season. The most common crop is shallots with tomatoes, spinach, peppers and the bitter tomato. The four latter crops are grown in small fenced gardens each of which has its own shallow well from which the plants are watered by splashing.

6. *Fruit production.*—There is a considerable production of oranges in the Kombo districts of South Bank Province and in the trade season, oranges from these districts can be purchased in almost any ' wharf town '.

Export Crops.

7. *Groundnuts.*—There was a slight fall in the acreage under groundnuts due variously to a decrease in the number of strange farmers from neighbouring territories, to a movement of some of the young Gambian farmers in the reverse direction and to increased cultivation of food crops. The compulsory date before which the lifting of nuts was prohibited varied from October 15th. in the Upper River Province to November 1st. in some of the Districts of South Bank Province. The commencement of the groundnut buying season was postponed from December 1st. to December 18th when it was possible to announce the fixed price for the current crop at 1/3d. per bushel at Bathurst and 1/1½d. per bushel at all the remaining stations. This price remained unchanged throughout the season which was the shortest on record, practically the whole crop of 42,500 tons being purchased in 11 weeks. The tonnage of nuts shipped during 1939 was as follows:—

Decorticated nuts ...	1,525 tons	valued at £10,322
Undecorticated nuts	47,585 tons	valued at £241,264

8. The quality of the 1938-39 crop was well maintained, the average amount of dust, foreign matter and excess shell being 1·640%, and the amount of bad kernels being 0·880%. These averages are well within the allowance allowed by the buyer, which is 2%. Unfortunately no premium is payable to the seller of the cargo if the cargo is of better quality than the agreed standard.

9. *Palm Produce.*—As mentioned in previous reports, the exploitation of palm produce was largely in the hands of strangers but the granting of free permits to Gambian collectors has encouraged local developement of the industry. During 1939, 656 tons of palm kernels worth £4,278 were exported.

10. *Beeswax.*—There has been an increase in the amount of beeswax exported in spite of low local prices and the fact that much is said to be exported to neighbouring territories. During the year 85,325 lbs. worth £2,803 were exported. The price offered during 1939 was 1¼d. to 1½d. per lb. for rough wax and 6d. per lb. for cleaned wax.

Livestock.

11. *General.*—The most striking fact is the large increase in the cattle population, the greatest increase having taken place in the Upper River Province.

During the period under review, the movement of trade cattle from the Senegal through the Gambia has, owing to economic conditions and war restrictions, come to a standstill, with the consequent increase in the use of local cattle for slaughter purposes. In the same way but to a lesser extent, the movement of sheep and goats has been affected.

12. *Economic Position.*—Although the cattle population has reached 48,514, it is the considered opinion that from 100,000 to 120,000 head of stock can be safely carried without overstocking.

13. *Animal Husbandry.*—The semi-starvation period through which so many cattle have to pass at the latter end of the dry season in many of the more arid parts of the tropics is completely lacking in the Gambia. In addition to swamp land grazing, plentiful supplies of drinking water from the river and the wells are available which does not necessitate the concentration of stock in any particular area. Manuring of lands is practised by kraaling in close proximity to the villages, and the compounds are manured from the manure collected from under the raised pens in which sheep and goats are kept. Pigs are kept in certain areas, where they may be allowed free range or kept in pens as in the Kombo districts.

14. *Hides and Skins.*—The following figures show the quantities of hides and skins exported durng 1939:—

6,286 lb. skins valued at £114
511 cwt. hides valued at £968.

The above in no way represents the total production of hides and skins; much is exported to neighbouring territories in the green state where itinerant traders offer a higher price for the hide than can be obtained from the firms.

Forestry.

15. *Forestry Committee.*—The actual terms of reference of the Forestry Committee were:—

"To consider the possibility of introducing into the Gambia schemes for the protection of existing forest areas, for the reafforestation of denuded area and for the cultivation of trees of economic value, and to make recommendations thereanent."

The committee has now completed its work and its report is being prepared.

16. *General.*—In the absence of trained forestry officers a complete forestry programme has not yet been put into practise but some progress can be reported from the South Bank Province

where a start has been made with the demarcation of forest reserves and where the clearing of bush for farms is limited to land which has been farmed within the previous ten years.

Pests and Diseases.

17. *Locusts.*—None have been reported in 1939.

18. *Rosette Disease of groundnuts.*—Isolated cases were reported in all provinces, but there was no serious outbreak. Propaganda continued to ensure the early planting of the crop and close spacing of the seed and the comparative freedom from the disease of farms so planted gives an excellent demonstration of the efficiency of these measures.

19. *Striga Senegalensis.*—The prevalence of this parasite throughout the Gambia is a cause for considerable alarm and must result in an appreciable annual loss in grain.

Native Authority Orders are in existence proclaiming the parasite obnoxious and compelling its control by hand pulling. As an additional means to ensuring increased food supplies these orders must be rigidly enforced throughout the country.

20. *Citrus disease.*—A condition with symptoms similar to those of ' die-back ' has appeared amongst the mature orange trees of the Kombo districts. Chlorosis occurs and there is gumming of twigs, branches and trunk. The fruits are stained with irregular brown patches and scale is prevalent. Remedial measures being taken include drastic pruning and trench manuring to enforce the nutrition of the trees.

21. *Rinderpest.*—The Veterinary Pathologist continued his work of the rinderpest immunisation scheme during the year.

SECTION II.

Work of the Department of Agriculture.

22. *Statement of policy.*—The statement of policy detailed below has been formulated and has received the approval of Government. The work done in the past and during the year under review is summarised under each section of the policy.

A. *To obtain self-sufficiency in the matter of food production coupled with an improvement in nutrition by the provision of a balanced and more varied diet.*

Summary of Activities:

i. Testing of rice introductions and distribution of higher yielding types. From Nigeria rices Nos. 1, 5, 18 and Guiana

Creole have been introduced, and varieties known as Guiana Creole; G.C. 79; G.E.B. 24; Bali and Djogoutes have been multiplied for distribution.

ii. *Popularisation and distribution of root crops.*—Sweet potatoes, cassava and to a lesser degree, yams. 500 bundles of sweet potatoe slips and 2,230 sticks of cassava have been distributed. Two new varieties of cassava have been introduced from Sierra Leone.

iii. *Testing of alternative and earlier maturing grain crops.*—Setaria italica and Maize introductions.

iv. *The introduction of legumes.*—Pigeon pea and green gram, and other cowpeas from Nigeria.

v. *Dry season irrigation work and the distribution of garden seeds.*—Tomatoes, peppers, onions, garden eggs etc. 195 ozs. seeds and 9,743 seedlings have been distributed. The Department has seven stations for the demonstration of dry season work, and in addition helps at five other village irrigation areas.

vi. Distribution of fruit and economic trees (*a*) to individuals and (*b*) for village plantations. Such trees include citrus, kola, coconut, avocado pear, breadfruit, shea nut etc. During the year 4,394 fruit trees have been distributed and these include 1,829 fruit trees to the Foni, Kiang and Jarra Districts. The free issue of these trees was conditional on the trees receiving careful attention by the planters, a threatened levy of 6d. per tree being payable where the trees died through neglect. The 8,000 trees distributed in the plantations in the Kombo last year show an overall survival rate of 30%. This rate varies between 45% and 13%, which is low when compared with the Department's plantations, where the trees merely receive the treatment that is recommended for the village plantations, and where the survival rate is 93%.

The shea nut plantations continue to show slow but steady growth. Seed has been requested from the Gold Coast and the blanks in those plantations that have been cared for will be filled, and plantations will be established where they are asked for.

B. *The maintenance and improvement of soil fertility and conservation of the soil by the utilisation of balanced systems of crops and animal husbandry.*

Summary of Activities:

i. Investigational work at Yoroberi-kunda Experimental Farm on crop rotations, the making and use of pen manure and of composting and cattle cultivation.

This work is still in progress and results so far appear very promising, but they have not yet reached the stage for publication.

ii. The institution of Family Unit Holdings demonstrating a balanced system of crop and animal husbandry, whereby cattle are not only used for ploughing but essentially for manure making and thus for maintaining the fertility of the holding. There are now four of these holdings in the country, all based on the findings of the Experimental Holding at Yoroberi-kuda.

iii. A small herd of cattle is kept at Yoroberi-kunda for breeding and observational purposes. With reference to the ghee industry, it was found that the milk per cow surplus to the requirements of calf averaged 1·023 pints per day. The difficulty of building up an industry on such a small surplus can be readily seen.

iv. The institution of a forestry programme to safeguard the wider problems of soil conservation.

A Forestry Committee appointed by the Governor is at present sitting and its recommendations will be relevant.

C. *Development of Export Crops and Animal Products.*

Summary of Activities:

i. *Groundnuts.*—Numerous introductions and selections have been tried, chiefly at Wuli. Only two have shown superiority over the local type on a field scale. These are Sir Charles from Nigeria and Basse which is a local selection.

The distribution of the best seed, and yield trials continue.

ii. *Palm kernels.*—Investigations and trials of oil presses and nut cracking machines are being carried out. Seedlings grown from seed from proved parents (ex Sierra Leone and Nigeria) have been grown and distributed.

iii. *Hides and Skins.*—Demonstration and instruction of the correct methods of flaying and drying have been successful. Apart from the lack of marketing facilities, increase in export trade is restricted by the low prices offered, in many cases higher prices being offered for hides in the green state for local use or for export to neighbouring territories.

iv. *Beeswax.*—The production of honey wax has been demonstrated and investigation and trial of improved types of double chambered hives is being carried out.

v. *Clarified butter.*—This has been investigated and methods of preparation demonstrated. A small quantity is now exported,

but no great development is expected until the number of cattle in the country increases substantially.

vi. *Various crops including tree crops that have been introduced with varying results.*—Benni seed, Tobacco, Acacia verek (the source of gum arabic) and shea nuts. Some of the introduction under section A are expected to reach export stage when local demand has been satisfied, for example, peppers and citrus pulp.

D. *Improvement in the preparation and marketing of agricultural produce including produce inspection.*

Summary of Activities:

i. There is the produce inspection of groundnuts for adulteration by dust, sticks and shells; and there is a check on the quality of palm kernels offered for sale; and on the flaying and drying of hides offered for sale.

E. *Agricultural Education and the Training of Agricultural staff.*

Summary of Activities:

i. Advice and assistance are given in the running of school gardens at Bathurst and Georgetown.

ii. The demonstration of crop rotation and the use of cattle is undertaken at the Armitage School at Georgetown and at the North Bank Provincial Prison.

iii. A start has been made in the holding of Horticultural cum Agricultural Shows in the Protectorate, and these have been a great success.

iv. As far as staff is concerned, the employment and practical training of ' students ' is undertaken as a possible pool from which to draw our future African staff.

23. Proposals for further implementing this policy have been submitted and will be included in the work of the Department as and when staff and funds become available.

24. *Experimental Works*:—All experimental work is now carried out at Yoroberi-kunda in the MacCarthy Island Province. During the year experiments were carried out on groundnuts, millet, guineacorn, cotton and sweet potatoes.

Manurial trials were carried out on millets and guineacorn, a dressing of one ton and two tons farm yard manure per acre being compared with a control of no manure. The experiment is not yet concluded but the increases in grain due to manuring are 34% for the one ton dressing and 56% for the two tons dressing.

Variety trials of local guineacorns and millets showed no difference between the varieties. A variety trial of groundnuts showed that the introduced Sir Charles groundnut from Nigeria was again superior in yield to all others.

Variety trials with cotton showed that Cambodia cotton introduced from India was the best yielder; and with sweet potatoes, the local variety gave the best return. These experiments were not conclusive and are being continued.

A groundnut cultivation experiment, of growing on the ridge versus growing on the flat showed that the flat cultivation gave the better return. However as twice the seed was needed for the flat as for the ridge, the result is not wholly conclusive, and the experiment is being continued.

25. *Mixed Farming.*—Fourteen acres of the farm at Yoroberi-kunda have been laid aside as a self contained experimental unit which is being run by a family with the aid of a pair of cattle. It is now completing its second year and valuable data is being collected on the economics of crop production and on the food requirements of the family. It is already obvious that the unit can supply more than is sufficient for the feeding of a balanced diet to the equivalent of four adults throughout the year in addition to the production of one ton of groundnuts for sale.

SECTION III.

Omitted.

SECTION IV.

There were no Legislative changes during the year.

J. TALLANTIRE,

Acting Senior Agricultural Superintendent,
For Senior Agricultural Superintendent.